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Matthew H. Brown is the Director of the National Conference of State Legislatures' Energy Project, which is responsible for advising state legislatures on energy issues. He and the Energy Project staff serve the needs of the 50 state legislatures on such issues as electric industry regulation, renewable energy, state energy planning, energy efficiency in buildings and alternative fuel vehicles. Mr. Brown has an extensive background in numerous areas of energy policy, and specializes in consulting services to state legislatures on these many complex issues.

Mr. Brown has been one of the country's most active national advisors to state legislatures on electric industry restructuring. He is the author of numerous articles on the issue, focusing on such subjects as state and local tax issues, public benefits and the efficacy of competitive markets. He is also called on by legislative leadership and committees on a regular basis to offer his services. He has spoken, sometimes on multiple occasions, before over half the nation's state legislatures. On these occasions he is usually a featured witness before legislative committees, frequently speaking and answering questions for a half to a full day. He has also been called on to offer his services to legislative party caucuses and to legislative staff members.

Mr. Brown has authored or co-authored numerous publications on renewable energy analyzing such issues as the development and history of the renewable energy, the efficacy of renewable energy incentives and others. He and the Energy Project staff have also assembled numerous "Energy Institutes"-- small and focused seminars for state legislators and staff on renewable energy and electric industry restructuring. He is a frequent speaker before legislative bodies and general energy audiences on renewable energy issues and a member of the National Wind Coordinating Committee Steering Committee.

Before joining the National Conference of State Legislatures, Mr. Brown was the Director of Special Projects for the City of New York Department of Telecommunications and Energy. In this capacity he was worked closely with the State Energy Office and Public Service Commission on a variety of renewable energy and alternative fuel vehicle issues. His duties also included an effort to deploy more renewable energy installations in City facilities.

Mr. Brown holds a BA from Brown University in Providence, Rhode Island and an MBA from New York University.

Renewable Energy Policies in Other States

Renewable Energy Policies

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Organization of Remarks

- What, generally, have states done?
- Why have they done it?
- What levels of support have states offered to renewables?

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Renewables Polices

- A system benefit fund
- A renewable portfolio standard
- Property tax incentives
- Net Metering
- State approval for green pricing programs

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Renewables Policies

- State purchasing programs
- Income tax incentives
- Sales tax incentives
- Grants and loans
- Disclosure and Certification programs
- Contractor licensing programs
- Equipment certification

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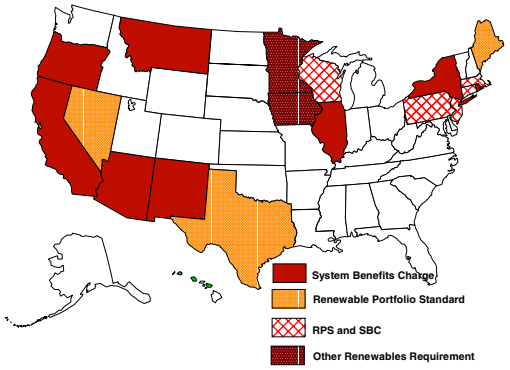
States with Renewable Energy Requirements



Effect of RPS & SBC Policies on Renewable Resources

RPS Policies (new by 2010)	3,800 MW
SBC Policies (new by 2010)	1,000 MW
National RPS – 7.5%	53,500 MW
Green Power (new by 2001)	300 MW
Total U.S. Generating Capacity	775,884 MW
Non Hydro Renewables (1998)	15,249 MW

Sources: LBNL/NREL study, NREL, and EIA

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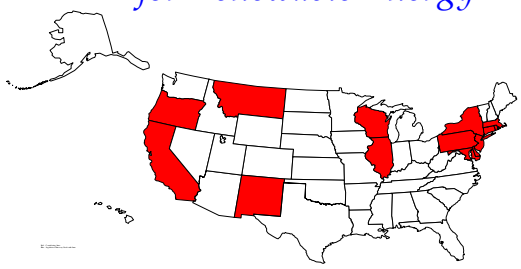
States w/System Benefit Charges for Renewable Energy



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A system benefits charge is a fee that every customer pays. It is almost always collected by the Distribution Company and remitted to the state. The funds that accumulate from a system benefits charge are allocated by law to a variety of activities. The categories of activities that are supported by a system benefits charge include:

- renewable energy
- energy efficiency
- low income customer support
- displaced utility worker retraining
- research and development
- other

These funds are sometimes set up to sunset after a period. In other cases, such as Massachusetts, they do not sunset.

Arguments for/against SBC

For	Against
SBCs are small compared to stranded costs	SBCs add to rates
SBCs are competitively neutral and are flexible	SBCs "re"regulate in era of "de"regulation
SBCs preserve necessary programs	SBCs preserve programs that are unnecessary

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Supporters of a system benefits charge justify it as follows: "In a competitive marketplace, certain somewhat higher cost activities that are valuable to society will not be maintained by the private sector as they have been in the past. The system benefits charge is means to keep those programs alive without penalizing any one customer."

Those in opposition to the charge point to the additional cost that it imposes and suggest that such programs should be supported by the competitive marketplace if they are to survive.

Why Have States Adopted System Benefit Funds?

- Traditional entities that have paid for efficiency, renewables, low income and research and development programs no longer do so.
- Each provides benefits that these states want to preserve.
  - Reliability benefits
  - Environmental benefits
  - Affordable service

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Administration of System Benefit Funds

- Funds can be administered by:
  - non-profit or quasi-governmental entity (as in Connecticut Innovations or Mass. Economic Development Fund)
  - utility
  - state energy office (as in the California Energy Commission)
  - state utility commission

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Administration Does Matter

- A state renewables fund to subsidize wind or biomass from an SBC can, if money flows into the state general fund, cause an equivalent decrease in federal wind/biomass tax credits.
- Such funds need to be kept out of state general funds in order to supplement, rather than offset, the federal tax credit.

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Administration Does Matter

- Administration by a quasi-government entity may allow direct investment of funds for economic development purposes.
- Administration with an Energy Office may allow closer coordination with other state policy goals.

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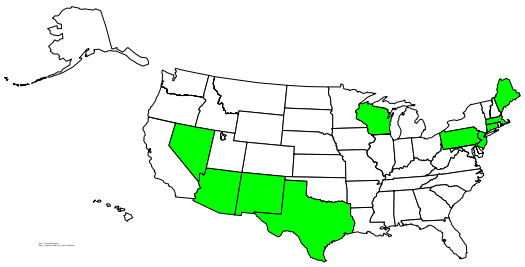
Connecticut and Massachusetts have opted for more of the economic development approach. In Connecticut, for instance, Connecticut Innovations manages the renewable energy portion of the system benefit funds, and will make direct investments in renewable energy companies that do business in Connecticut.

California has opted to allow state agencies to run these programs.

Renewable Portfolio Standard Programs (RPS)



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A renewable portfolio standard (RPS) is a means to continue support for renewable energy in a competitive marketplace or, in a few occasions, in a monopoly marketplace.

In general, a portfolio standard requires that each retail electricity seller include some amount of renewable energy as part of its product mix. This requirement is usually tradable, so that a retailer with less than the required mix would be able to purchase credits from one with greater than the required percentage.

State Approaches to RPS

- **CT:** New renewable .5% by 7/1/00; increasing by .25%/yr thru 7/09; Existing renew. increasing from 5.5% to 7% by 2009
- **ME:** 30% RPS (in-state RPS was already 50% - mostly hydro)
- **NJ:** By 1/1/06, 1% Class I renewables; By 1/1/12, 4% Class I renewables

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States choose different percentages for the requirement, with most hovering around 2-10 percent. One state, Maine, has a 30% requirement. This 30% amount actually reflects the amount of renewable energy already in the state's mix even before restructuring.

Connecticut established a program that defined Class I and Class II renewables. Class I renewables are new projects. Class II renewables are projects that existed at the time that the restructuring law was enacted.

Maine has included in its definition of renewables municipal solid waste. Most states do not include this resource in their definition of renewables.

A Texas Case Study

- Texas Instituted a 2000 MW portfolio standard.
  - To be phased in from 2003 to 2009.
- Big issues:
  - cost
  - technological feasibility
- Turning out to be cheaper than expected.
  - Especially with rising gas prices

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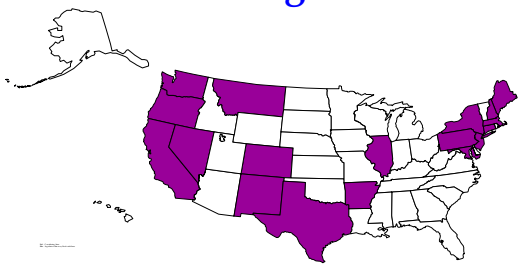
Texas has a 2000 MW portfolio standard, which will result in significant wind energy development. The energy cost is turning out to be lower than expected, especially with the recent increase in the price of natural gas.

Two PA utilities, PECO and PP&L have a 2% RPS that increases annually by 0.5% unless the RPS increases costs by more than 2%. These were included in the settlement with the two utilities that was made after the law was passed.

Nevada has a "solar" portfolio standard, which requires that a small percentage of the electricity sold come from solar-generated electricity. Nevada's RPS began at 0.2% of total consumption, rising to 1% by 2010. Half of this is to be obtained from solar energy sources.

Disclosure & Certification Programs



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Most states that have put a restructuring law in place have included a provision for some type of consumer disclosure in their legislation. This generally includes a requirement for disclosure of price, terms and environmental characteristics of the electricity contracted for.

States Requiring Disclosure

- By Legislation
  - AZ -CT
  - OR -MA
  - ME
  - MT
  - NV
  - IL
  - CA
  - PA
  - TX
- By Commission
  - VT
  - RI
  - NH
  - NY
  - NJ
  - CO
  - NY

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State Approaches to Disclosure and Certification

- CA: coal, large and small hydro (<or>30MW) nat.gas, nuke, biomass waste, geothermal, solar and wind.
  - To be renewable no more than 25% fossil;
  - "Green-e" brand for at least 50% renewable.
- MA: CO2, NOx, SO2, heavy metals
- CO: state hasn't restructured but requires utilities to divulge price of G,T&D and source; no emissions b/c not equitable

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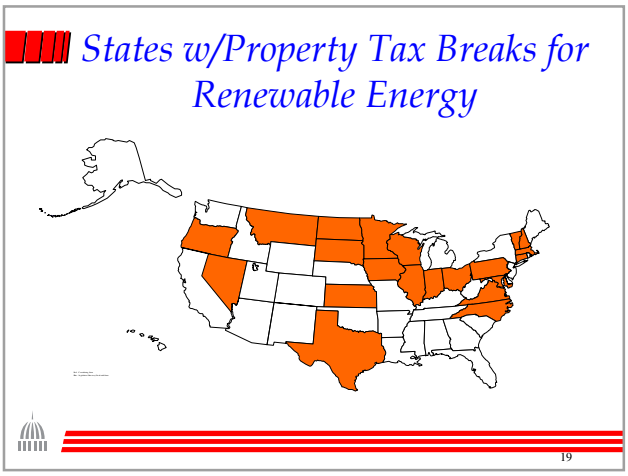
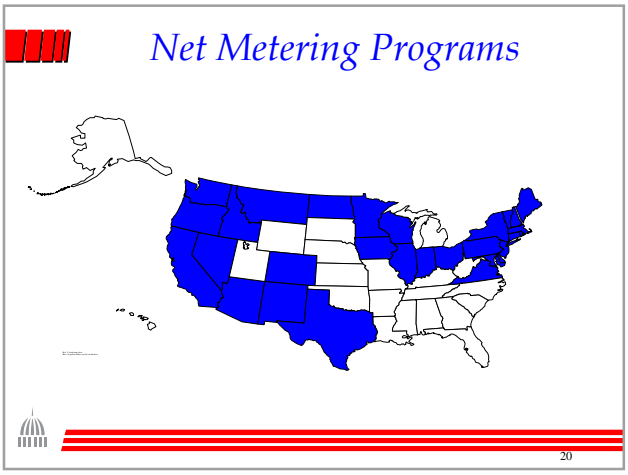
Colorado is an example of a state that has put this requirement in place that has not passed a restructuring law.

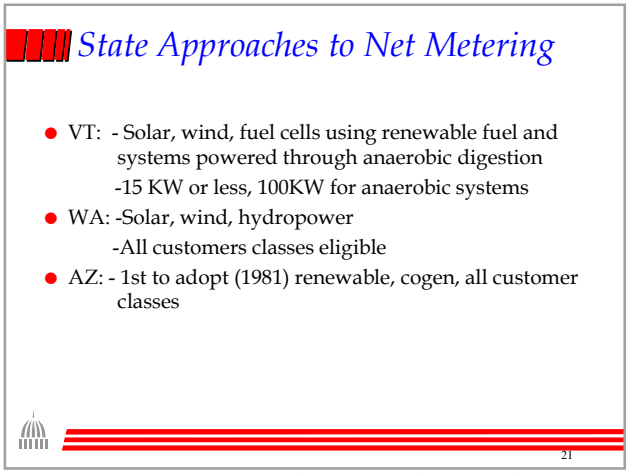


Property tax breaks can come in a number of forms, including some type of reduction in the assessed value of the property (i.e. assessing it a lower-than-typical percent of its true value) or perhaps classifying certain types of wind energy property as non-taxable (i.e. perhaps not taxing the foundation or tower but taxing the turbine itself, as in Minnesota).

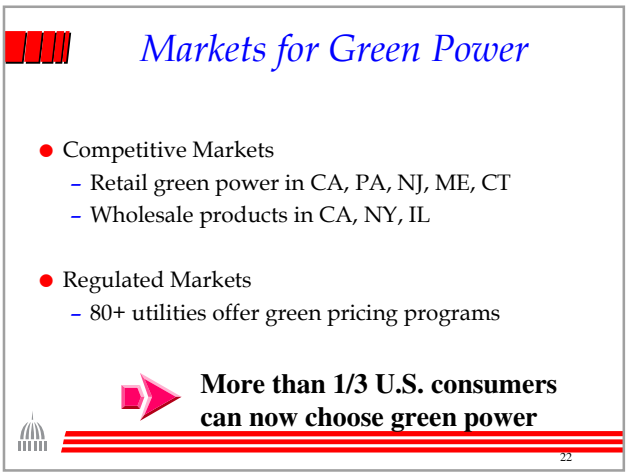
The reason that we need to be "thoughtful" and perhaps wary of property tax breaks for wind in particular, is that you don't want to lose community support for the wind development. Most developers I've talked to don't really suggest big property tax breaks for wind.

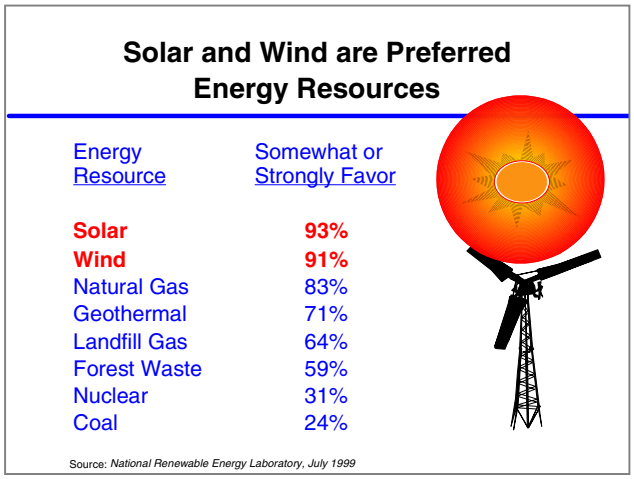
Net metering allows small renewable power generators to sell electricity back to their utility at the retail electric rate. In essence it means these customers can "run the meter backwards." If a consumer who buys electricity at 8 cents per kWh installs solar panels on his/her roof that consumer can sell electricity back to the utility when not using it at 8 cents per kWh.

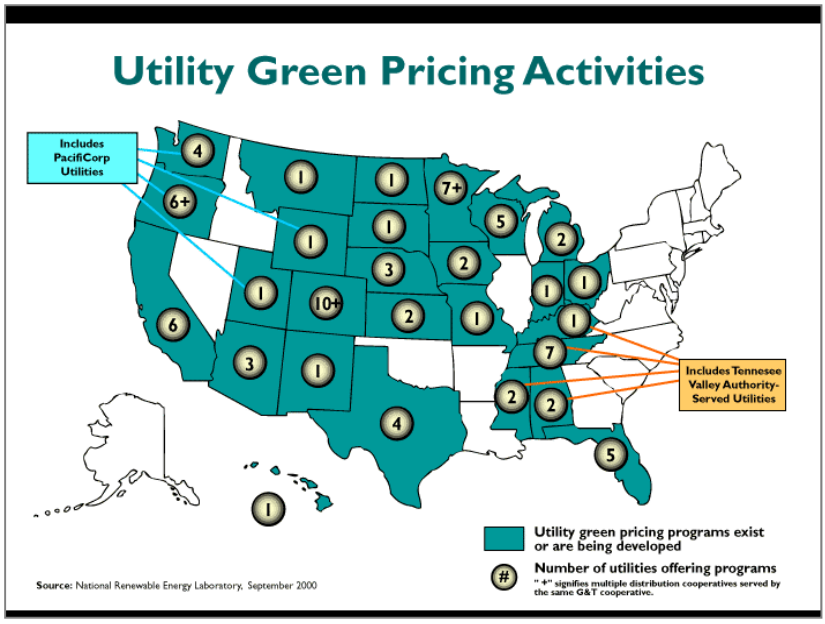




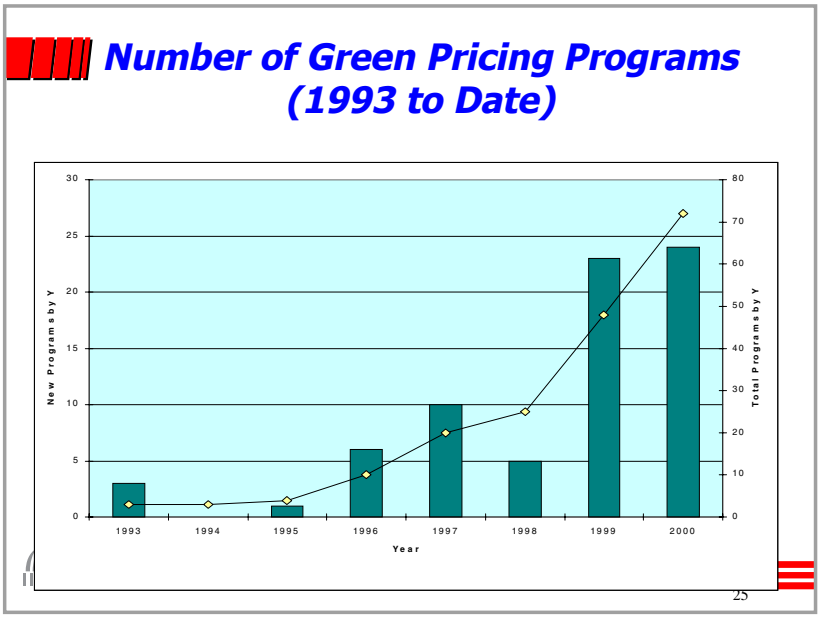
30 states now have a net metering law of some kind in place. This is usually, but not always, done as part of a larger electricity restructuring law. The rules usually give an upper limit to the size of a qualifying installation (Delaware and Oregon, for instance, qualify systems up to 25 kW). They also specify what type of resources qualify for the program.







Many utilities offer green pricing programs. Green pricing programs allow customers to choose "green" power sources, and to pay a premium for the service.



The number of green pricing programs has been increasing. In some cases, customers are on "waiting lists" while new renewable energy projects are developed to meet the demand.